Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

RUSTS FROM GLACIER NATIONAL PARK, MONTANA

PAUL C. STANDLEY[1]

During the summer of 1919, the writer spent ten weeks in Glacier National Park, under the direction of the National Park Service, for the purpose of securing data concerning the flora of the region. Attention was devoted almost wholly to the flowering plants and vascular cryptogams, but a few of the lower cryptogams were secured incidentally, and a small amount of time was spent in searching specially for rusts. Sixty-one species of these interesting plants were secured, and since they come from an area in which very little botanical collecting has been done, it may be worth while to publish a list of them. The list is particularly deficient in grass rusts, for grasses were not collected, and consequently the rusts that may have existed upon them were likewise neglected.

The writer is under obligations to Dr. J. C. Arthur, who has kindly determined the collections. The specimens are in the U. S. National Herbarium, and duplicates of most of them are in Doctor Arthur's herbarium.

The flowering plants of Glacier Park are of great interest. The flora of the east slope of the Park is similar to that of the central Rocky Mountains, but the flora of the west slope shows a marked relationship with that of the Pacific Coast. Many species of plants, especially of trees, find the eastern limit of their range there, and many plants which are common in Alberta and British Columbia extend into the United States in northwestern Montana, but are rare or absent elsewhere south of the international boundary.

The material collected during the season of 1919 has served as the basis of a popular account of the plants of the Park, to be issued by the National Park Service, and of a technical flora of the region, to be published by the National Museum.

---

[1] Published by permission of the Secretary of the Smithsonian Institution.

AECIDIUM ALLENII Clinton

I. On *Lepargyrea canadensis* (L.) Greene (15505).

ALLODUS PALMERI (D. & H.) Arth.

I, iii. On *Penstemon ellipticus* Coult. & Fish. (16759).

CALYPTOSPORA COLUMNARIS (A. & S.) Kühn

On *Pseudotsuga mucronata* (Raf.) Sudw. (16902). Dr. Arthur states that this rust has not been reported previously upon *Pseudotsuga.* It occurs usually upon species of *Abies.*

COLEOSPORIUM RIBICOLA (C. & E.) Arth.

II, III. On *Ribes lacustre* (Pers.) Poir. (15903).

COLEOSPORIUM SOLIDAGINIS (Schw.) Thüm.

II. On *Solidago concinna* A. Nels. (16915). ii, III. On *Aster meritus* A. Nels. (18686). III. On *Aster Fremontii* (Torr. & Gray) Gray (18425), and *Aster conspicuus* Lindl. (16935).

CRONARTIUM COMANDRAE Peck

On *Comandra pallida* A. DC. (15944).

GYMNOSPORANGIUM BETHELI Kern

I. On leaves of *Crataegus Douglasii* Lindl. (17844).

GYMNOSPORANGIUM GERMINALE (Schw.) Kern

On fruit of *Crataegus Douglasii* Lindl. (17416) and *Amelanchier alnifolia* Nutt. (17007).

GYMNOSPORANGIUM JUVENESCENS Kern

I. On leaves of *Amelanchier alnifolia* Nutt. (15597).

GYMNOSPORANGIUM NELSONI Arth.

I. On leaves of *Amelanchier alnifolia* Nutt. (17743, 17425, 15159) and *Sorbus sitchensis* Roem. (16533, 18449, 18643, 17034). Almost every plant of the mountain ash had rusted leaves. The yellow spots on the leaflets are conspicuous in early summer, but no aecia were found in 1919 until July 28.

HYALOPSORA CHEILANTHES (Peck) Arth.

On *Cryptogramma Stelleri* (Gmel.) Prantl (17144).

MELAMPSORA ALBERTENSIS Arth.

ii, III. On *Populus tremuloides* Michx. (18732). Seen only about Belton, although aspens are abundant on the east slope of the Park.

MELAMPSORA ARCTICA Rostr.

II, iii. On *Salix Scouleriana* Barr. (18485).

MELAMPSORA CONFLUENS (Pers.) Jackson

II, III. On *Salix Bebbiana perrostrata* (Rydb.) Ball (15699), *S. subcaerulea* Piper (15111, 18805, 18460, 17366), *S. monticola* Bebb? (17686), and *S. Scouleriana* Barr. (15971, 18736, 15969, 15606, 16680).

MELAMPSORA OCCIDENTALIS Jackson

II, III. On *Populus hastata* Dode (18765).

MELAMPSORELLA ELATINA (A. & S.) Arth.

II. On *Cerastium strictum* L. (15752) and *C. beeringianum* Cham. & Schlecht. (17479).

MELAMPSOROPSIS PYROLAE (DC.) Arth.

II. On *Pyrola chlorantha* Sw. (17924), *P. secunda* L. (16038), *P. asarifolia* Michx. (15206), and *Moneses uniflora* (L.) Gray (15241).

PHRAGMIDIUM ANDERSONI Shear

On *Potentilla fruticosa* L. (17360).

PHRAGMIDIUM IMITANS Arth.

II, III. On *Rubus strigosus* Michx. (16085).

PHRAGMIDIUM IVESIAE Sydow

II, III. On *Potentilla Nuttallii* Lehm. (15020, 17739). I. On *Potentilla monspeliensis* L. (15544a).

PHRAGMIDIUM OCCIDENTALIS Arth.

II, III. On *Rubus parviflorus* Nutt. (15196, 17928).

PHRAGMIDIUM POTENTILLAE (Pers.) P. Karst.

On *Potentilla pennsylvanica* L. (17324, 17336).

PHRAGMIDIUM ROSAE-ACICULARIS Liro.

I. On *Rosa Bourgeauiana* Crép. (15711). I, ii. On *Rosa nutkana* Presl (14967). III. On *Rosa gymnocarpa* Nutt. (18862, 17923) and *R. nutkana* Presl (18750).

PUCCINIA ABERRANS Peck

On *Smelowskia americana* Rydb. (16474, 15801).

PUCCINIA ABUNDANS (Peck) Jackson

I. On *Symphoricarpos albus* (L.) Blake (15674).

PUCCINIA ANTIRRHINI D. & H.

Occurring abundantly at Lake McDonald on cultivated snapdragons.

PUCCINIA ARNICALIS Peck

III. On *Arnica latifolia* Bong. (15899).

PUCCINIA ASPERA D. & H.

On *Saxifraga Mertensiana* Bong. (16814).

PUCCINIA ASTERUM (Schw.) Kern

I. On *Aster frondeus* (Gray) Greene (15329, 14968) and *Erigeron macranthus* Nutt. (17978).

PUCCINIA BALSAMORRHIZAE Peck

On *Balsamorrhiza sagittata* (Pursh) Nutt. (15983).

PUCCINIA CIRCACEAE Pers.

On *Circaea alpina* L. (17078, 17937).

PUCCINIA CIRSII Lasch.

On *Cirsium Hookerianum* Nutt. (15705).

PUCCINIA CLEMATIDIS (DC.) Lagerh.

I. On *Thalictrum megacarpum* Torr. (15258, 14944, 15197) and *Halerpestes Cymbalaria* (Pursh) Greene (17622). II, III. On *Elymus glaucus* Buckl. (17962).

PUCCINIA FERGUSSONI B. & Br.

On *Viola palustris* L. (16493).

PUCCINIA FRASERI Arth.

On *Hieracium albiflorum* Hook. (16365).

PUCCINIA HEUCHERAE (Schw.) Dict.

On *Mitella nuda* L. (16492).

PUCCINIA HIERACII (Schum.) Mart.

On *Hieracium albiflorum* Hook. (15188) and *H. columbianum* Rydb. (16663, 18758).

PUCCINIA HOLBOELLII (Hornem.) Rostr.

On *Arabis Lyallii* S. Wats. (16231, 15419, 15838, 18036).

PUCCINIA MESOMEJALIS B. & C.

On *Clintonia uniflora* (Schult.) Kunth (15187).

PUCCINIA PIMPINELLAE (Schum.) Mart.

I, ii, III. On *Glycosma occidentalis* Nutt. (14923, 15927). II, III. On *Osmorrhiza divaricata* Nutt. (18480).

PUCCINIA RHAMNI (Pers.) Wettst.

I. On *Rhamnus alnifolia* L'Hér. (14951, 15260). II, III. On *Calamagrostis canadensis* (Michx.) Beauv. (16868).

PUCCINIA SAXIFRAGAE Schl.

On *Saxifraga rivularis* L. (18044a).

PUCCINIA TARAXACI Plowr.

II, III. On *Taraxacum officinale* Weber (15922, 18757).

PUCCINIA TROXIMONTIS Peck

III. On *Agoseris villosa* Rydb. (16080) and *A. turbinata* Rydb. (16662).

PUCCINIA URTICAE (Schum.) Lagerh.

I. On *Urtica cardiophylla* Rydb. (15237).

PUCCINIA VERATRI Duby.

On *Epilobium anagallidifolium* Lam. (15199, 16104) and *E. alpinum* L. (18024a).

PUCCINIA VIOLAE (Schum.) DC.

III. On *Viola canadensis* L. (15931, 17917).

PUCCINIASTRUM ARCTICUM AMERICANUM Farl.

II. On *Rubus strigosus* Michx. (18247).

PUCCINIASTRUM MYRTILLI (Schum.) Arth.

II. On *Vaccinium membranceum* Dougl. (18745, 18266, 16359), *V. caespitosum* Michx. (18818), and *V. Myrtillus* L. (16361).

PUCCINIASTRUM PUSTULATUM (Pers.) Diet.

On *Epilobium platyphyllum* Rydb. (17974), *E. angustifolium* L. (18775, 18478), and *E. adenocaulon* Hausskn. (16998).

PUCCINIASTRUM PYROLAE (Pers.) Diet.

II. On *Pyrola secunda* L. (18694). Collected also at Iceberg Lake, on *Pyrola minor* L., by Miss Gertrude Norton.

UREDINOPSIS ATKINSONII Magn.

II. On *Athyrium Filix-foemina* (L.) Roth (17918).

UROMYCES GLYCYRRHIZAE (Rabenh.) Magn.

On *Glycyrrhiza lepidota* Nutt. (18833).

UROMYCES HEDYSARI-OBSCURI (DC.) C. & P.

I. On *Hedysarum sulphurescens* Rydb. (16658).

UROMYCES HETERODERMUS Sydow

On *Erythronium grandiflorum* Pursh (16182, 18086).

UROMYCES INTRICATUS Cooke

I, II. On *Eriogonum Piperi* Greene (15595, 15980).

UROMYCES JUNCI (Desm.) Tul.

I. On *Arnica mollis* Hook. (16937).

UROMYCES POROSUS (Peck) Jackson

I. On *Vicia americana* Muhl. (15123).

UROMYCES SILENES (Schl.) Fckl.

III. On *Silene multicaulis* Nutt. (16586).

UROMYCES TRIFOLII (Hedw. f.) Lev.

II. On *Trifolium repens* L. (18863) and *T. hybridum* L. (18864).

UROPYXIS SANGUINEA (Peck) Arth.

II. On *Berberis repens* Lindl. (15189, 18872).

U. S. NATIONAL MUSEUM,
WASHINGTON, D. C.